

APPENDICES



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ACRONYMS AND
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The Secretary of Energy
Washington, D.C. 20585

September 16, 2009

Mr. Claiborne P. Deming
Chair, National Petroleum Council
1625 K Street, NW
Washington, DC 20006

Dear Mr. Deming:

It is the policy objective of the United States to protect our Nation from the serious economic and strategic risks associated with our excessive reliance on foreign oil and the destabilizing effects of a changing climate. All energy uses and supply sources must be reexamined in order to enable the transition towards a lower carbon, more sustainable energy mix. Transitions in the energy sector will require the replacement of vehicles, more efficient buildings and industrial facilities, and large scale deployment of new forms of energy. The Council is uniquely positioned to provide advice to the Department on Energy on two important topics: *Future Transportation Fuels* and *Prudent Development of North American Natural Gas and Oil Resources*.

The U.S. transportation system must evolve substantially over the next twenty years in ways that advance our national interests. Next generation vehicles, fuels, and infrastructure will be introduced to diversify fuel choice, increase fuel economy and lower greenhouse gas and other emissions. Conventional and advanced biofuels will make an important contribution, with liquefied natural gas and non-liquid fuels such as electricity and compressed natural gas also helping the transition to a clean, low carbon energy future. Each fuel has technical, economic, infrastructure and social attributes that must be considered in evaluating its role in a modern, prosperous U.S. economy.

Policies to address the transition to an expanded suite of reliable, secure and clean, low-carbon transportation fuels require a comprehensive understanding of options, risks, and consequences. Accordingly, I request the National Petroleum Council to conduct a study on future transportation fuels which would analyze U.S. fuels prospects through 2030 for auto, truck, air, rail, and waterborne transport. The study should address fuel demand, sources, manufacturing, distribution, and infrastructure. Of particular interest is the Council's advice on policy options and pathways for integrating new fuels and vehicles into the marketplace, including infrastructure development. Factors to consider include technological advances, market dynamics, environmental mandates, cost/benefit tradeoffs, and impacts on land and water use.



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Even as we transition to a lower carbon energy future, fossil fuels will continue to play a major role in the Nation's energy mix for many decades. An important part of this transition will be to recognize and responsibly develop the natural gas resources supply chain and infrastructure in North America. In recent years, there have been significant new developments in the North American natural gas and oil resource base. In particular, large new unconventional sources of natural gas and oil have been identified.

In order to consider energy policy measures that enhance U.S. energy security and economic competitiveness, it is important that Congress, the Administration, and relevant agencies have the best and most up-to-date understanding of conventional and unconventional resources supply chain and infrastructure potential. Accordingly, I request the National Petroleum Council to reassess the North American resources production supply chain and infrastructure potential, and the contribution that natural gas can make in a transition to a lower carbon fuel mix. Your study should describe the operating practices and technologies that will be used to minimize environmental impacts, and also describe the role of technology in expanding accessible resources. Of particular interest is the Council's advice on policy options that would allow prudent development of North American natural gas and oil resources consistent with government objectives of environmental protection, economic growth, and national security.

For the purposes of the Council's study of *Future Transportation Fuels* and the *Prudent Development of North American Natural Gas and Oil Resources*, I am designating Deputy Secretary Dan Poneman to represent me and to provide the necessary coordination between the Department of Energy and the National Petroleum Council. He will also provide coordination with the Department of the Interior, Department of Transportation, Environmental Protection Agency, and other Federal agencies as required.

Sincerely,



Steven Chu



The Secretary of Energy
Washington, D.C. 20585

April 30, 2010

Mr. Claiborne P. Deming
Chair, National Petroleum Council
1625 K Street, NW
Washington, DC 20006

Dear Mr. Deming:

Other Department of Energy leaders and I greatly appreciated the dialogue you arranged on the National Petroleum Council's prior report, *Facing the Hard Truths About Energy: A Comprehensive View to 2030 of Global Oil and Natural Gas*, and preliminary plans for the upcoming studies on *Future Transportation Fuels* and *Prudent Development of North American Natural Gas and Oil Resources*. The discussions provided valuable insights for the path forward.

The projected decline in U.S. gasoline demand through 2030 envisioned in the *Hard Truths* report clearly illustrated the potential energy, economic and environmental benefits made possible by implementing motor vehicle technology advances matched with aggressive yet achievable fuel efficiency standards. I salute the prior study leaders for their forward thinking recommendations.

President Barack Obama has called upon other countries to join the United States in reducing greenhouse gas emissions by 17 percent by 2020 and more than 80 percent by 2050 relative to 2005 levels across all energy sectors. The Council's new studies provide an opportunity to demonstrate U.S. leadership on transformational concepts in transportation and resource development.

The reduction of the carbon intensity of the U.S. transportation fleet will play an important role in meeting these goals. In addition to the objectives stated in my initial request, I would like the *Future Transportation Fuels* study to address the following question:

What actions could industry and government take to stimulate the technological advances and market conditions needed to reduce life-cycle greenhouse gas emissions in the U. S. transportation sector by 50 percent by 2050 relative to 2005 levels while enhancing the Nation's energy security and economic prosperity?



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With regard to energy supply, the United States sees a future in which valuable domestic energy resources are responsibly produced to meet the needs of American energy consumers consistent with national, environmental, economic, and energy security goals. The United States, the world's second largest producer of natural gas and the third largest producer of oil, has the opportunity to demonstrate global leadership in technological and environmental innovation. Accordingly, I request the Council's advice on potential technology and policy actions capable of achieving this vision as part of the *Prudent Development of North American Natural Gas and Oil Resources* study.

Our intent is to stimulate dynamic study processes that venture beyond business-as-usual industry and government assessments. I am pleased that the Council shares a mutual interest with the Department of Energy in seeking diverse participation in the study efforts including participation by industry, academia, environmental, and other public interest groups, and government leaders.

We look forward to reviewing the Council's detailed study plans.

Sincerely,



Steven Chu

RS: We would love to brief the members of the NPC and the task forces, where relevant, on the R&D the DOE is investing in that may dramatically improve the technology choices we could have in 5-15 years. These programs are in ARPA-E, FE and the Office of Science.

DESCRIPTION OF THE NATIONAL PETROLEUM COUNCIL

In May 1946, the President stated in a letter to the Secretary of the Interior that he had been impressed by the contribution made through government/industry cooperation to the success of the World War II petroleum program. He felt that it would be beneficial if this close relationship were to be continued and suggested that the Secretary of the Interior establish an industry organization to advise the Secretary on oil and natural gas matters. Pursuant to this request, Interior Secretary J. A. Krug established the National Petroleum Council (NPC) on June 18, 1946. In October 1977, the Department of Energy was established and the Council was transferred to the new department.

The purpose of the NPC is solely to advise, inform, and make recommendations to the Secretary of Energy on any matter requested by the Secretary, relating to oil and natural gas or the oil and gas industries. Matters that the Secretary would like to have considered by the Council are submitted in the form of a letter outlining the nature and scope of the study. The Council reserves the right to decide whether it will consider any matter referred to it.

Studies undertaken by the NPC at the request of the Secretary include:

- *Industry Assistance to Government – Methods for Providing Petroleum Industry Expertise During Emergencies* (1991)
- *Petroleum Refining in the 1990s – Meeting the Challenges of the Clean Air Act* (1991)
- *The Potential for Natural Gas in the United States* (1992)
- *U.S. Petroleum Refining – Meeting Requirements for Cleaner Fuels and Refineries* (1993)
- *The Oil Pollution Act of 1990: Issues and Solutions* (1994)
- *Marginal Wells* (1994)
- *Research, Development, and Demonstration Needs of the Oil and Gas Industry* (1995)
- *Future Issues – A View of U.S. Oil & Natural Gas to 2020* (1995)
- *U.S. Petroleum Product Supply – Inventory Dynamics* (1998)
- *Meeting the Challenges of the Nation’s Growing Natural Gas Demand* (1999)
- *U.S. Petroleum Refining – Assuring the Adequacy and Affordability of Cleaner Fuels* (2000)
- *Securing Oil and Natural Gas Infrastructures in the New Economy* (2001)
- *Balancing Natural Gas Policy – Fueling the Demands of a Growing Economy* (2003)
- *Observations on Petroleum Product Supply* (2004)
- *Facing the Hard Truths about Energy: A Comprehensive View to 2030 of Global Oil and Natural Gas* (2007)
- *One Year Later: An Update on Facing the Hard Truths about Energy* (2008)
- *Prudent Development: Realizing the Potential of North America’s Abundant Natural Gas and Oil Resources* (2011).

The NPC does not concern itself with trade practices, nor does it engage in any of the usual trade association activities. The Council is subject to the provisions of the Federal Advisory Committee Act of 1972.

Members of the National Petroleum Council are appointed by the Secretary of Energy and represent all segments of the oil and gas industries and related interests. The NPC is headed by a Chair and a Vice Chair, who are elected by the Council. The Council is supported entirely by voluntary contributions from its members.

Additional information on the Council’s origins, operations, and reports can be found at www.npc.org.

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